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Abstract

PURPOSE: To surely stop the supply of raw component gas on the crystal surface of base plate and to improve the controllability of crystal growth by sectioning the downstream side of reaction tube into plural separate chambers with a partition wall to use as a raw component adsorption part or a reaction part, and providing a holding bar driving means inserting a base plate crystal alternatively.

CONSTITUTION: In the atomic layer epitaxial growth device for producing compound semiconductor, such as GaAs, the partition wall is provided in the down stream side of the quartz reaction tube 1 to form the raw component adsorption part 8 and the raw component reaction part 9, and Ga-component introducing opening 6 and As-component introducing opening 7 are provided respectively to the adsorption part 8 and the reaction part 9, and carrier gas, such as H₂, is introduced from the upstream side of the reaction tube. Moreover, carrier gas auxiliary introducing openings 4, 5 are preferably provided to the upstream side of the introducing openings 6, 7 of each component to promote the stoppage of raw component gas supply. The base plate crystal 2 is fixed to the top end of the quartz holding bar 3 connected with the driving unit which is rotatable and vertically movable, and transferred from A-point to B-point in the adsorption part or to C-point in the reaction part.